



# Delmarva Power's Maryland Energy Efficiency Program Overview



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# Select EmPOWER MD Portfolio Programs

- EmPOWER MD legislation passed in 2007, goal of 15% energy and demand reduction by 2015 (Distribution companies responsible for 10% energy reduction)
- Program to date spend thus far in Maryland:
  - Pepco: ~\$315M since 2007
  - Delmarva Power: ~\$92M since 2007
- Program to date savings at gross wholesale (Energy)
  - Pepco: ~1,160,000 MWH since 2007
  - Delmarva Power: ~270,000 MWH since 2007
- Summer peak demand savings at gross wholesale (excluding dynamic pricing)
  - Pepco: ~390 MW
  - Delmarva Power: ~73 MW

# Lighting

- Program Overview
  - Discounts for CFL and LED bulbs, etc.
  - Historically has driven at least three quarters of residential energy savings
  - Expected to provide lower deemed savings in future due to codes and standards changes, but will remain a major contributor to Delmarva Power's EmPOWER MD Program
- Eligible Measures
  - Standard and Specialty CFLs & LEDs, Decorative Light Strings (DLS), Automatic Sensors and Lighting Fixtures
- Customer Incentives
  - These are negotiated with Delmarva Power's retail partners on a SKU-by-SKU basis – for CFLs on average \$1.35/ bulb and for LEDs between \$3 and \$8/ bulb

# Appliance Rebates

- Program Overview
  - The program provides rebates and education around the purchase of energy efficient appliances
- Eligible Measures/ Customer Incentives

Measure	Incentive
Refrigerator Tier 2	\$ 100
Refrigerator Tier 3	\$ 200
Clothes Washers Tier 2	\$ 50
Clothes Washers Tier 3	\$ 200
Electric Heat Pump Water Heater	\$ 500
Clothes Dryer Tier 1	\$ 50
Clothes Dryer Tier 2 (Heat Pump Clothes Dryer)	\$ 300
Dehumidifier	\$ 25
Room AC Tier 1	\$ 25
Room AC Tier 2	\$ 30
Pool Pump - 2 Speed	\$ 150
Pool Pump - VSD	\$ 400
Freezers	\$ 75

# Appliance Recycling

- Program Overview
  - The program is designed to remove old, inefficient refrigerators, freezers, and room air conditioners from the grid. Each unit is collected from a customer's home and disposed of in compliance with the EPA's Responsible Appliance Disposal criteria. In return, the customer is provided with a monetary incentive.
- Eligible Measures/ Customer Incentives

Measure	Incentive
Refrigerator - Voucher	\$ 65
Refrigerator - Cash	\$ 50
Freezer - Voucher	\$ 65
Freezer - Cash	\$ 50
Room AC - Cash or Voucher	\$ 25
Dehumidifier - Cash or Voucher	\$ 25

# High Efficiency HVAC Rebates

- Program Overview
  - This program is intended to incentivize upgrades of high-Seasonal Energy Efficiency Rating (SEER) HVAC systems, and previously included system tune ups. This program has had limited adoption historically, and the tune ups have been discontinued in the 2015-17 period.
- Eligible Measures/ Customer Incentives

Measure	Efficiency Level	Rebate
Central Air Conditioner Tier 4 (new)	≥ 18 SEER and ≥ 13 EER	\$1,000
Air Source Heat Pump Tier 3	≥ 16 SEER and ≥ 13 EER and ≥ 9 HSPF	\$750
Air Source Heat Pump Tier 4 (new)	≥ 18 SEER and ≥ 13 EER and ≥ 9.5 HSPF	\$1,250
Geothermal Heat Pump (closed loop)	≥ 17.1 EER and ≥ 3.6 COP	\$1,800
Ductless Mini-split Air Conditioner Tier 1	≥ 14.5 SEER and ≥ 12 EER	\$200
Ductless Mini-split Air Conditioner Tier 2	≥ 18 SEER and ≥ 12.5 EER	\$400
Ductless Mini-split Heat Pump Tier 1	≥ 14.5 SEER and ≥ 12 EER and ≥ 8.2 HSPF	\$200
Ductless Mini-split Heat Pump Tier 2	≥ 18 SEER and ≥ 12.5 EER and ≥ 9 HSPF	\$400

# Quick Home Energy Checkup (QHEC)

- Program Overview
  - Visual inspection/direct install program designed to assess the home's energy use, recommend energy-saving improvements, and help the customer start saving immediately by installing energy-saving products-- all at no additional cost to the customer.
- Eligible Customers
  - Any residential customer that has not received a QHEC already
  - Available to both single family and multifamily residential customers
- Eligible Measures/ Customer Incentives
  - See Following

## QHEC Cont'd

Direct Install Measures
13 watt CFL
18 watt CFL
23 watt CFL
16 watt R30
23 watt R40
3 way CFL's
23 watt Dimmable Spiral
9 watt mini globe
9 watt candelabra
14 watt type A
water pipe insulation
electric water heater tank wrap
1.5 GPM showerhead -- white
1.5 GPM showerhead -- chrome
1.75 GPM showerhead -- white
1.75 GPM showerhead -- chrome
handheld showerhead -- white
handheld showerhead -- chrome
kitchen faucet aerator (1.5 GPM)
bath faucet aerator (1.0 GPM)
smart strip



# Home Performance with ENERGY STAR® (HPwES) Program

- Program Overview
  - Home Performance with ENERGY STAR is a nationwide program overseen by the DOE and guided by the standards of the Building Performance Institute (BPI). The program's targets are to improve a homeowner's comfort and energy efficiency within their home by treating the house as a system while ensuring the health and safety of its occupants.
  - Two components- direct install measures/audit, and HPwES specific jobs
- Eligible Customers
  - All single family residences that at least have a central HVAC system
- Eligible Measures/ Customer Incentives
  - See following

# HPWES Cont'd

HPwES Audit Fees and Direct Install Measures (Incentives Paid to Contractor)	
Audit Fee (\$100 collected from customer)	\$300
Compact Fluorescents (CFLs)	
13W	\$5/bulb
19W	
23W	
9W Mini Globe	
9W Candelabra	
14W Type A	
16W R30	\$6/bulb
23W R40	
12/22/33W 3-Way	\$7/bulb
23W Dimmable Spiral	
Domestic Hot Water (DHW)	
3/4" Pipe Insulation	\$18/system
Electric Tank Wrap	\$40/unit
Water Conservation	
Low-Flow Showerhead (fixed) 1.5gpm	\$18/each
Low-Flow Showerhead (fixed) 1.75gpm	
Low-Flow Showerhead (handheld)	\$25/each
Low-Flow Aerator (kitchen)	\$6/each
Low-Flow Aerator (bath)	

HPWES Customer Incentives/Rebates		
Eligible Measure	Eligibility Requirements	Incentive
HPWES Audit		
Comprehensive Home Energy Audit (CHEA)	The home performance job must be completed within 12 months after the initial CHEA	\$400 Audit reduced to \$100 – A Savings of 75%
Direct Install Measures	Maximum allowances per measure type; DHW and Water Conservation measure eligibility based on DHW system-type	No additional cost to customer
HPWES Job		
Air Sealing	Minimum 20% leakage reduction if home is tested-in $\geq 120\%$ BAS OR If home is tested-in $< 120\%$ BAS (a) 20% reduction achieved with adequate ventilation recommended/installed per BPI standards, or (b) SIR $\geq 0.8$ for any reduction $< 20\%$	50% of cost paid to customer up to \$2000
Attic Flat Insulation	Existing attic flat insulation $\leq R20$ must be brought to $\geq R38$ OR If existing insulation $> R20$ , SIR for added insulation must be $\geq 0.8$	50% of cost paid to customer up to \$2000
Installation of any additional eligible* energy efficient measures	Examples include, but are not limited to: Attic Slope/Wall Insulation, Exterior Wall Insulation, Rim Joist Insulation, Windows	50% of cost paid to customer up to \$2000
Duct Sealing	Current requirements remain	\$500
*Eligibility of installed measures determined by performing a cost/energy savings analysis of modeled measures using the Beacon HEA software.		

# Residential Behavioral Program

## ■ Program Overview

- Approximately 400,000 residential customers in Maryland currently receive home energy reports (paper and electronic) providing normative/ behavioral comparisons with similar neighbors, as well as personalized energy efficiency tips and interval meter enabled data. High bill alerts are planned for the 2015 summer for a subset of these customers.

## ■ Eligible Customers

- All residential customers that are not part of the control group or have insufficient or unusable billing history (ideally 12 months of usage, but can be implemented without this)

# Non-Residential Prescriptive

- Programs
  - Existing Buildings, Custom and New Construction
- Overview
  - Incorporate a whole building approach, using prescriptive (generally lighting, chillers, and VFDs) and custom measures (upgrades specific to premise) for existing and new buildings
- Feasible Market
  - Non-Residential customers with over 100 kW demand
  - Deep savings available to customers who have already performed basic improvements, as well as cheaper/ easier options for others
- Eligible Measures
  - Lighting, HVAC, VFDs, Controls, etc.
- Customer Incentives
  - Incentives for comprehensive energy studies, prescriptive and custom incentives, and enhanced incentives for deeper savings

# Small Business

- Program Overview
  - Incorporates Quick Energy Check-up (QEC) and emphasis on comprehensive retrofits, with prescriptive and custom measures, for existing and new buildings
- Feasible Market
  - Small (<100 kW peak demand) non-residential customers that make up 90% (+/-) of non-residential customers
- Eligible Measures
  - Lighting (prescriptive only), HVAC, VFDs, selected controls, custom measures
- Customer Incentives
  - No charge for QEC and low-cost /no-cost measures
  - Prescriptive and custom incentives are enhanced from those offered to larger customers

# Non-Residential Retrocommissioning

- Program Overview
  - Offerings to improve the operational features of customer facilities in order to improve energy efficiency without replacing equipment
  - Positioned to incent the increasing role of technology to track, diagnose, and assist building owners / operators in achieving high performance buildings
  - Change behavior through education of facility staff and occupants
- Feasible Market
  - Primarily mid-sized to large customers
- Eligible Measures
  - Commissioning, training (O&M and Occupant Training Programs), operational improvement measures, and real time performance assessment